TRANSCORE

Encompass™ 6 Multi-Protocol Reader

FEATURES

- **Compatible with a wide range of industry standard formats**
- **Multi-protocol operation at highway speeds**
- **Mutual authentication and data encryption for higher security applications**
- **Fully integrated reader and radio frequency module**
- **915 MHz RF band operation**
- **Software-controlled RF power**
- **Ethernet and RS–232 communications**
- **Mounting up to 85 feet (26 meters) from antenna**
- **Time-division multiplexing (TDM) capable using either standard TDM cabling or global positioning system (GPS) timing**

TransCore's Encompass™ 6 Multi-Protocol Reader is an integrated high-speed, multi-protocol 915-MHz radio frequency identification (RFID) reader system that includes an RF transceiver board and processor in a single assembly. The Multi-Protocol Reader is ideal for high-speed, multi-lane installations with a requirement to read two tag protocols or to provide a migration path from an existing tag protocol.

The Multi-Protocol Reader is capable of supporting any of the following protocols in a given installation:

- American Trucking Associations (ATA), full-frame and half-frame (read-only)
- California Title 21 (read-only)
- eGo®* (read/write)
- Inter-Agency Group (IAG) (read/write)
- Super eGo (SeGo)* (read/write)
- TransCore IT2200 (read/write)

Where multiple tag protocols are used in the same installation, the Multi-Protocol Reader is capable of supporting any two of the above protocols.

The Multi-Protocol Reader is also suitable for a wide variety of automatic vehicle identification transportation applications, including electronic tolling, open road tolling, electronic vehicle registration, parking, and rail applications.

The Multi-Protocol Reader can be integrated into an onsite lane controller or a NEMA enclosure. The Multi-Protocol Reader transmits and receives signals through a single antenna.

*eGo tags are fully compliant with ANSI INCITS 256:2001 and ISO 18000-6 standards. SeGo is a superset of the eGo protocol.

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COMMUNICATIONS

Frequency Range

Downlink: 911.75 to 919.75 MHz adjustable in 0.25 MHz steps

Uplink: 902.25 to 903.75 MHz and 910.00 to 921.50 MHz adjustable in 0.25 MHz steps

Actual frequency range is protocol-dependent.

The above frequencies are in the location and monitoring service (LMS) band.

RF Control

Programmable with host command

Communications Interface

Ethernet, RS–232

Antenna Interface

SMA connector

Read Range

Read performance varies depending on operating protocol, tag and reader configuration, and environment.

POWER REQUIREMENTS

Input Supply Voltages

DC: 19–30V DC

AC: 19–27V RMS, 47–63 Hz

Input Power

DC or AC: 40 watts maximum

In-rush Current

8 amps max., duration ≤25 ms

PHYSICAL

Dimensions

Multi-protocol Reader Size (reader only): 14.5 x 8.6 x 3.0 in. (36.8 x 21.8 x 7.6 cm)

Multi-protocol Reader Weight (reader only): 6.5 lb (2.9 kg)

NEMA Box Size: 18.6 x 18.0 x 10.6 in. (47.2 x 45.7 x 25.4 cm)

NEMA Box Mounting Plate Size: 22.0 x 16.7 x 0.10 in. (55.8 x 42.4 x 0.25 cm)

Encompass 6 Weight (reader, NEMA box, and mounting plate): 32.0 lb (14.5 kg)

Mounting Location

In lane controller or NEMA box

ENVIRONMENTAL

Operating Temperature

Encompass 6: -40°F to +158°F (-40°C to +70°C), integrated unit

Encompass 6 (in NEMA box): -40°F to +131°F (-40°C to +55°C)

Storage Temperature

Encompass 6: -40°F to +185°F (-40°C to +85°C)

Humidity

95% non-condensing

Vibration (sinusoidal)

5 to 20 Hz, 0.1-inch peak-to-peak

20-200 Hz, 2 G peak

Shock

10 G pulse at 11 ms duration

LICENSING

Equipment License

User is required to obtain Part 90 site license from the FCC to operate the unit in the United States. Access the FCC Web site at www.fcc.gov/Forms/Form601/601.html for more information.

FCC ID: FIHXXXXXXXXXXX (See product label for actual ID number.)

Users in all countries should check with the appropriate local authorities for licensing requirements.

COMPLIANCE

RF Interference

Units have been tested and are verified to Part 15 of the FCC rules for a Class A digital device.

Standards

The Multi-protocol Reader complies with the requirements of Standard for Information Technology and Telecommunications Equipment (UL60950 Third Edition).

OPTIONS

Enclosure

NEMA 4X enclosure

Wireless Reader Synchronization

GPS device assembly

Multiple Lane Operation

Antenna multiplexing

External Device Control

Digital input/output assembly

System Diagnostics

Receive signal strength indicator

TRAINING

Installation, operation, and maintenance training for TransCore authorized dealers is available through TransCore. For details, call (800) 755-0378.

DOCUMENTATION

Encompass™ 6 Multi-Protocol Reader System Guide

Encompass™ 6 Multi-Protocol Reader Quick Reference Card

TRANSCORE

For product information call: 1.800.923.4824 or 972.733.6600 (outside the U.S.) Fax 972.733.6486

www.**transcore**.com

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